



SEQUENCE LISTING

<110> Suga, Hiroaki

<120> Catalytic RNA Molecules with Aminoacylation Activity

<130> 11520.0222

<140> US 09/721,414

<141> 2000-11-22

<150> US 60/167,331

US 60/214,382

<151> 1999-11-24

2000-06-28

<160> 22

<210> 1

<211> 110

<212> DNA

<213> artificial sequence

<220>

<221> n represents a, t, g or c.

<222> 21-90

<223> synthetic oligonucleotide containing random pool of 70 nucleotides

<400> 1

ggatcgtcag tgcattgaga nnnnnnnnnnnn nnnnnnnnnnnn	40
nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn	80
nnnnnnnnnnnn ggtgggtatcc ccaaggggta	110

<210> 2

<211> 76

<212> DNA

<213> artificial sequence

<220>

<223> completely synthesized primer complementary to the tRNA^{Gln}

<400> 2

tggctgcggt acgaggattc gaacctcgga atgccggatt	40
tagaaatccg gtcccttacc ccttggggat accacc	76

<210> 3

<211> 52

<212> DNA

<213> artificial sequence

<220>

<223> 5' primer containing T7 promoter sequence

<400> 3

ggtaacacgc atatgtaata cgactcacta taggatcgtc
agtgcattga ga

40
52

<210> 4

<211> 20

<212> DNA

<213> artificial sequence

<220>

<223> 3'completely synthesized primer

<400> 4

tggctgcggt acgaggattc

20

<210> 5

<211> 146

<212> RNA

<213> artificial sequence

<220>

<223> pre-12 catalytic RNA

<400> 5

ggaucgucag ugcauugaga uuuccgcagc ccuucucacu
aacggugggu cauggguauu ggcguuaggu gcggggaugcu
acgcuggugg uauccccaag gguacgggac cggacauucg
agauucgaau ccucguaccg cagcca

40
80
120
146

<210> 6

<211> 151

<212> RNA

<213> artificial sequence

<220>

<221> n represents a,t,g or c

<222> 12

<223> pre-38 catalytic RNA

<400> 6

ggaucgucag uncauugaga uuuccgcagc ccuucucacu
aacggugggu ucauggguau uggcguuagg ugcggggaugc
uacuacgcug gugguauccc caaggguacg ggaccggauc
auucgagauu cgauuccucg uaccgcagcc a

40
80
120
151

<210> 7

<211> 150

<212> RNA

<213> artificial sequence

<220>

<223> pre-29 catalytic RNA

<400> 7

ggaucgucag	ugcauugaga	uuuccgcagg	cccuucucac	40
uaacgguggg	ucauggguau	uggcguuagg	ugcgggaugc	80
uacuacgcug	gugguaucce	caagggguacg	ggaccggaca	120
uucgagauuc	gaauccucgu	accgcagcca		150

<210> 8

<211> 150

<212> RNA

<213> artificial sequence

<220>

<223> pre-36 catalytic RNA

<400> 8

ggaucgucag	ugcauugaga	uuuccgcagc	ccuucucacu	40
aacggugggu	cauggguauu	ggcguuaggu	gcggggaugc	80
acuacgcugg	ugguaucce	aagggguacg	gaccggauca	120
uucgagauuc	gaauccucgu	accgcagcca		150

<210> 9

<211> 150

<212> RNA

<213> artificial sequence

<220>

<223> pre-24 catalytic RNA

<400> 9

ggaucgucag	ugcauugaga	uuuccgcagg	cccuucucac	40
uaacgguggg	ucauggguau	uggcguuagg	ugcgggaugc	80
uacuacgcug	gugguaucce	caagggguacg	ggaccggaca	120
uucgagauuc	gaauccucgu	accgcagcca		150

<210> 10

<211> 149

<212> RNA

<213> artificial Sequence

<220>

<223> pre-25 catalytic RNA

<400> 10

ggaucgucag	ugcauugaga	uuuccgcagc	ccuucucacu	40
aacggugggu	cauggguauu	ggcguuaggu	gcggggauc	80
acuacgcugg	ugguaucce	aagggguacg	gaccggacau	120
ucgagauucg	aauccucgua	ccgcagcca		149

<210> 11

<211> 149
<212> RNA
<213> artificial Sequence

<220>
<223> pre-22 catalytic RNA

<400> 11
ggaucgucag ugcauugaga uuuccgcagc ccuucucacu 40
aacggugggu cauggguguu ggcguuaggu gcggggaugcu 80
acuacgcugg ugguaucucc aagggguacgg gaucggacau 120
ucgagauucg aauccucgua ccgcagcca 149

<210> 12
<211> 149
<212> RNA
<213> artificial Sequence

<220>
<221> n represents a,t,g or c
<222> 112
<223> pre-5 catalytic RNA

<400> 12
ggaucgucag ugcauugaga uuuccgcagc cccucucacu 40
aacggugggu cauggguauu ggcguuaggu gcggggaugcu 80
acuacgcugg ugguaucucc aagggguacgg gnccggacau 120
ucgagauucg aauccucgua ccgcagcca 149

<210> 13
<211> 149
<212> RNA
<213> artificial Sequence

<220>
<223> pre-19 catalytic RNA

<400> 13
ggaucgucag ugcauugaga uuuccgcagc ccuucucacu 40
aacggguaggu cauggguauu ggcguuaggu gcggggaugcu 80
acuacgcugg ugguaucucc aagggguacgg gaccggacau 120
ucgagauucg aauccucgua ccgcagcca 149

<210> 14
<211> 150
<212> RNA
<213> artificial Sequence

<220>
<223> pre-8 catalytic RNA

<400> 14
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 aacggugggu ucauggguau uggcguuagg ugcgggaugc 80
 uacuacgcug gugguaucuu caagggguacg ggaccggaca 120
 uucuagauuc gaauccucgu accgcagcca 150

<210> 15
 <211> 148
 <212> RNA
 <213> artificial Sequence

<220>
 <223> pre-23 catalytic RNA

<400> 15
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 aacggugggu cauggguauu ggcguuaggu gcgggaugcu 80
 acuacgcugg ugguaucucca agggguacggg accggacauu 120
 cgagauucga auccucguac cgcagcca 148

<210> 16
 <211> 75
 <212> RNA
 <213> Escherichia coli

<220>
 <223> otRNA

<400> 16
 ggugguaucc ccaaggggua agggaccgga uucuaaaucc 40
 ggcauuccga gguucgaauc cucguaccgc agcca 75

<210> 17
 <211> 160
 <212> RNA
 <213> artificial sequence

<220>
 <223> H2 Leu catalytic RNA

<400> 17
 ggauugcag ugcauugaga ugcccaaagc ccuucucacu 40
 uccggugggu caugcguuau ugcguuaggu gaggaugcu 80
 aguaugcggg ugguaucucca gggguaaggg accggauucu 120
 aaauccggcau uccgagguuc gaauccucgu accgcagcca 160

<210> 18
 <211> 156
 <212> RNA
 <213> artificial sequence

<220>

<223> D1-Leu catalytic RNA

<400> 18

ggaucgucag ugcauugaga uagugucacu aggcgggggg	40
ugauagcgca uuuugagguu ugguuugggg gguuaugcgu	80
gaguucuugg gugguaacca agggguaagg gaucuaaauc	120
cgacauuccg agguucgaau ccucguaccg cagcca	156

<210> 19

<211> 35

<212> RNA

<213> artificial sequence

<220>

<223> RNA forming a minihelix

<400> 19

ggugguacga gguucgauc cucguaccgc agcca	35
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<210> 20

<211> 73

<212> RNA

<213> artificial sequence

<220>

<223> V1 variant of otRNA

<400> 20

ggugguaucc ccaaggguaac gggaccggau ucuaaauccg	40
gcuaucgaga uucgaauccu cguaccgcag cca	73

<210> 21

<211> 75

<212> RNA

<213> artificial sequence

<220>

<223> V2 variant of otRNA

<400> 21

ggugguaucc ccaaggggua cgggaccgga uucuaaaucc	40
ggcauuccga gauucgauc cucguaccgc agcca	75

<210> 22

<211> 73

<212> RNA

<213> artificial sequence

<220>

<223> V3 variant of otRNA

<400> 22

ggugguauc ccaaggguaa gggaccggau ucuaaaucg
gcauucgagg uucgaauc cuaccgcag cca

40
73